

We claim:

*Sub A*

~~1. A sample detection apparatus, comprising a polarized radiation source, flow chamber and signal detector, said flow chamber placed to contact polarized radiation from said polarized radiation source, said signal detector placed to selectively detect radiation propagated from said flow chamber at about 54.7 degrees from the direction of polarization of said contacted polarized radiation.~~

10           2. The sample detection apparatus of claim 1, comprising a trajectory of a sample stream that is orthogonal to said irradiation source.

15           3. The sample detection apparatus of claim 1, comprising a trajectory of a sample stream that is orthogonal to said signal detector.

          4. The sample detection apparatus of claim 2, wherein said trajectory of said sample stream is parallel to said direction of polarization.

20           5. The sample detection apparatus of claim 4, wherein said signal detector is placed to selectively detect radiation propagated at about 54.7 degrees from a line parallel to said trajectory of said sample stream.

6. A flow cytometer, comprising a polarized radiation source, flow chamber and signal detector, said flow chamber placed to contact polarized radiation from said polarized radiation source, said signal detector  
5 placed to selectively detect radiation propagated from said flow chamber at about 54.7 degrees from the direction of polarization of said contacted polarized radiation.

7. The flow cytometer of claim 6, comprising a  
10 trajectory of a sample stream that is orthogonal to said irradiation source.

8. The flow cytometer of claim 6, comprising a trajectory of a sample stream that is orthogonal to said signal detector.

15 9. The flow cytometer of claim 7, wherein said trajectory of said sample stream is parallel to said direction of polarization.

20 10. The flow cytometer of claim 9, wherein said signal detector is placed to selectively detect radiation propagated at about 54.7 degrees from a line parallel to said trajectory of said sample stream.

11. A sample detection apparatus, comprising a polarized radiation source, flow chamber, signal detector and a trajectory of a sample stream that is orthogonal to said polarized radiation source and said signal detector, said polarized radiation source placed to contact said trajectory of said sample stream with polarized radiation, said polarization direction being 35.3 degrees from a line parallel to said trajectory of said sample stream.

12. A flow cytometer, comprising a polarized radiation source, flow chamber, signal detector and a trajectory of a sample stream that is orthogonal to said polarized radiation source and said signal detector, said polarized radiation source placed to contact said trajectory of said sample stream with polarized radiation, said polarization direction being 35.3 degrees from a line parallel to said trajectory of said sample stream.

13. A method of detecting fluorescent intensity for a sample in a flow cytometer independent of anisotropic radiation emission, comprising:

- (a) contacting a sample in a flow cytometer with polarized radiation; and
- (b) detecting radiation emitted by said sample at about 54.7 degrees with respect to the direction of polarization of said polarized radiation at the point of sample contact.

14. The method of claim 13, wherein said flow cytometer comprises a sample stream having a trajectory orthogonal to an irradiation source.

15. The method of claim 13, wherein said flow cytometer comprises a sample stream having a trajectory orthogonal to a detector.

5 16. The method of claim 14, wherein said flow cytometer comprises a sample stream having a trajectory orthogonal to a detector.

17. The method of claim 14, wherein said trajectory is parallel to said direction of polarization.

10 18. The method of claim 17, wherein the point of observation of a signal detector is placed about 54.7 degrees from a line parallel to said trajectory of said sample stream.

15 19. A method for determining scattered irradiation passing through a filter, comprising determining a degree of polarization through a filter, ~~wherein said degree of polarization is greater than 0.5.~~